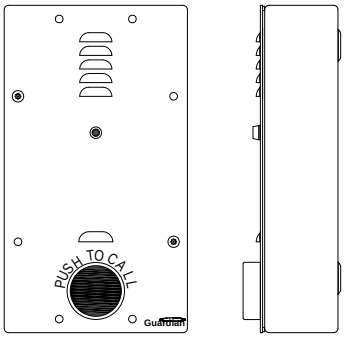
Guardian Telecom Inc. Industrial Communications Worldwide

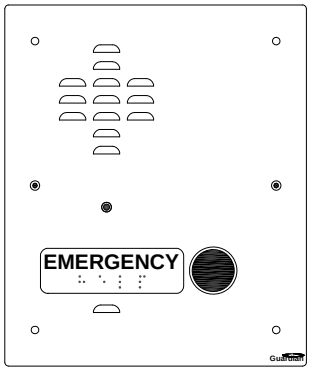
Heavy Duty Emergency Telephones

HDE Series

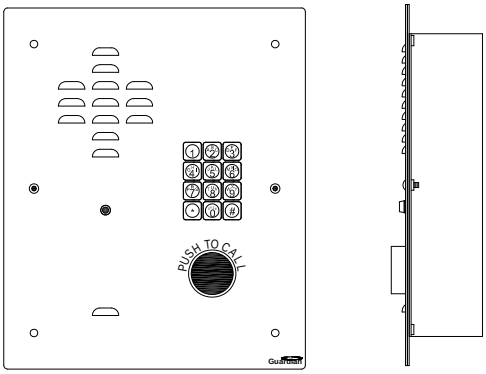
Installation & Operation



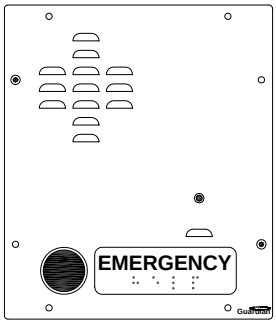
HDE10



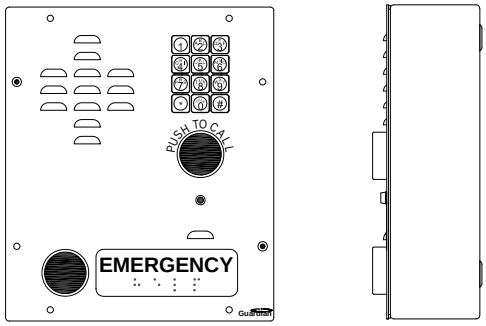
HDE11 & HDE11A



HDE1100 & HDE1100A



HDE12 & 12A



HDE1200 & 1200A

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ISO 9001

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Package Contents

(1) HDE SERIES Telephone
(1) Driver bit for Tamper Resistant Screws
(1) Installation & Operation Manual

Product Overview

HDE SERIES Heavy Duty Emergency Telephones

HDE SERIES telephones (Standard & Advanced) are intended for use in public areas where direct assistance or hands-free communication is required. They provide a hands-free, two-way link to assistance through analog, half-duplex telephone transmission. A call may be initiated from the telephone or from the monitoring station. The telephone may be programmed to autodial two numbers or to ring down through a PABX. With an optional external signaling alarm such as a Scream Alert an HDE telephone is an effective tool to alert emergency personnel of an urgent situation. These telephones also provide the capability of monitoring the status of each unit from a remote location informing personnel of a malfunction. Monitoring equipment is sold separately.

No other telephones may be installed on the HDE extension.

The HDE11 & HDE12 Series telephones come with an ADA (American Disability Act) compliant label (in Braille), making it well suited for University and College campuses, elevators, parking facilities, ATMs, mass transit stations, amusement parks, senior citizen housing, hospitals and medical centers, or industrial parks.

All models have an auxiliary relay that can energize an alerter, camera or other security device when the phone is off hook.

HDE telephones can be set up to either auto-answer or to block incoming calls; see Incoming Calls.

HDE – STANDARD Series Overview:

The HDE10, HDE11, HDE1100, HDE12 & HDE1200 are all available in our Standard Series package. The HDE standard series telephones are telephone line powered for basic operation and do not require external power. They offer a single Auxiliary Device Relay to remotely control an external device (e.g. security camera). The Auxiliary Device Relay is closed whenever the HDE telephone is off-hook. Provision of a supplemental 12 to 24 Volt AC/DC power supply will increase the speaker volume from 80dB to 85 dB at 0.5 meter.

HDE – ADVANCED Series Overview:

The HDE11A, HDE1100A, HDE12A & HDE1200A are included in our Advanced Series product line and are intended for use where a supplemental power supply is available. The advanced series have an integrated 5W audio amplifier to provide superior audio quality over typical line powered devices. All models have a single Auxiliary Device Relay to remotely control an external device (e.g. security camera). The Auxiliary Device Relay is closed whenever the HDE telephone is off-hook. In addition the Advanced Series have two supplemental relays that are controlled from the monitoring station, the first one by pressing button 1 and the second by pressing button 2 on the monitoring station telephone. These relays can control cameras, external lighting, electronic door locks, etc.

NOTE: ***In the event of a supplemental power failure, the advanced HDE product will continue to operate in a basic functional mode however audio will be at a reduced level. The primary and supplemental relay controls will continue to function however the devices to which they are connected may no longer operate.***

Features

Enclosure and Faceplate

- 16 Gauge steel, zinc dichromate plated and powder coated.

Emergency Button and Call Button

- Vandal resistant plastic

Tamper Resistant Screws

- Protect against unauthorized access.

Remote Programming

- program options from a remote location (password protected)

Power Surge Protection

- Surge Arrestor to protect from lightning strikes
- Polyswitch Resettable Fuse – self resetting fuse to protect from line surges

Relay(s)

- Auxiliary – on all models - Switches power to a beacon, camera or similar device whenever the HDE telephone is off-hook.
- Supplemental – Two additional relays on advanced series products and managed from the monitoring station can control cameras, external lighting, electronic door locks, etc.

Options and Accessories

Conformal Coated Circuitry

- Circuit board protected with a silicon based conformal coating making it resistant to corrosive agents (e.g. H_2S, SO_2 and NH_3) and environments with high humidity.

Piezo Pushbutton

- Piezo pushbutton (requires external power supply)

10V-24V AC or DC Supplemental External Power Supply

- Can be used with standard or advanced series HDE products.

MODELS

Part Number	Model	Installation	Call Button Configuration	Two Additional Relays	Audio Power Amplifier	Maximum Speaker Volume @ 0.5 Meters	
						Line Powered	With External Power
P6974	HDE-10	Wall Mount	Single Emergency		0.25 Watt	82dB	85dB
P6977	HDE-11	Recessed	Single Emergency		0.25 Watt	82dB	85dB
P6984	HDE-11A	Recessed	Single Emergency	Yes	5 Watt	82dB	92dB
P6983	HDE-1100	Recessed	Single call button & 12 digit keypad		0.25 Watt	82dB	85dB
P6985	HDE-1100A	Recessed	Single call button & 12 digit keypad	Yes	5 Watt	82dB	92dB
P6979	HDE-12	Wall Mount	Single Emergency		0.25 Watt	82dB	85dB
P6986	HDE-12A	Wall Mount	Single Emergency	Yes	5 Watt	82dB	92dB
P6987	HDE-1200	Wall Mount	Single Emergency plus call button & 12 digit keypad		0.25 Watt	82dB	85dB
P6988	HDE-1200A	Wall Mount	Single Emergency plus call button & 12 digit keypad	Yes	5 Watt	82dB	93dB

Installing the HDE 10 Telephone

- Follow all appropriate electrical codes and use only approved electrical fittings for the installation. If 120VAC power is provided to the Auxiliary Relay the enclosure must be properly grounded.

  Note: *Verify regulatory requirements before installing on a public network.*
- Ensure that none of the electrical connection circuits are live.
- No other telephones may be installed on the HDE extension.
- Remove the cover screws from the front of the unit and carefully remove the front cover assembly. Note that the electronics are attached to the front plate.
- Choose a wall location that is free of obstructions and permits space for cable or conduit runs.

  See: *Figure 2 - HDE10 Mounting*
- Ensure mounting can support 4lbs (1.8kg) and any additional foreseeable load.
- Use the template provided or the enclosure itself to locate and drill holes for #8 or M4 mounting screws.
- Secure the unit to the wall.
- For convenience while connecting wiring the faceplate may be temporarily mounted inverted to either side of the enclosure.
- Install an appropriate fitting into the 7/8” (22mm) opening in the bottom of the enclosure. Bring telephone cable into the enclosure through the fitting and attach individual wires from the exchange (Tip/Ring/Ground) to the surge arrestor (Tip & Ring are not polarity sensitive). If a conduit hub is used, ensure that it is grounded to the ground stud on the surge arrestor.

  See: *Figure 3 - Wiring* Standard Models
- If the external power supply and/or the Auxiliary Device Relay are utilized connect wiring in accordance with local electrical standards. If an additional cable entrance is required punch a hole in the enclosure in a convenient location. Ensure that the fittings and wiring will not interfere with the circuit board when the faceplate is replaced.

  Tip: *The 12 volt external power supply is only required to increase the volume. It is not needed for the relay to operate.*
- If it is desired to prevent unauthorized changes to the programming and avoid nuisance calls move the jumper on JP2 from P to R after initial programming has been completed.

  Note: *This will limit the telephone to outgoing calls only.*

Commissioning

- Ensure all connections are tight, then replace and secure the cover. Use the driver bit provided to install the tamper resistant screws.

  Tip: *Store the driver bit in a secure place for future use.*
- Connect the telephone into the system.
- Program the telephone.

  See: *HDE Programming.*
- Test the unit by calling to and from another unit.

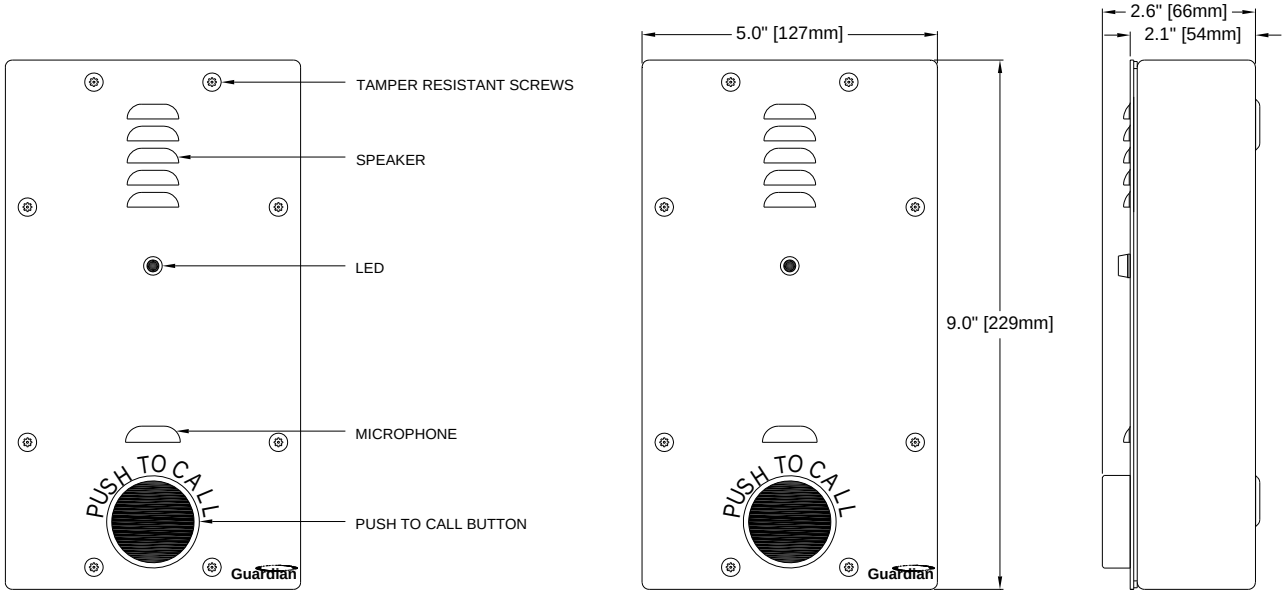


Figure 1 - HDE10 Features & Dimensions

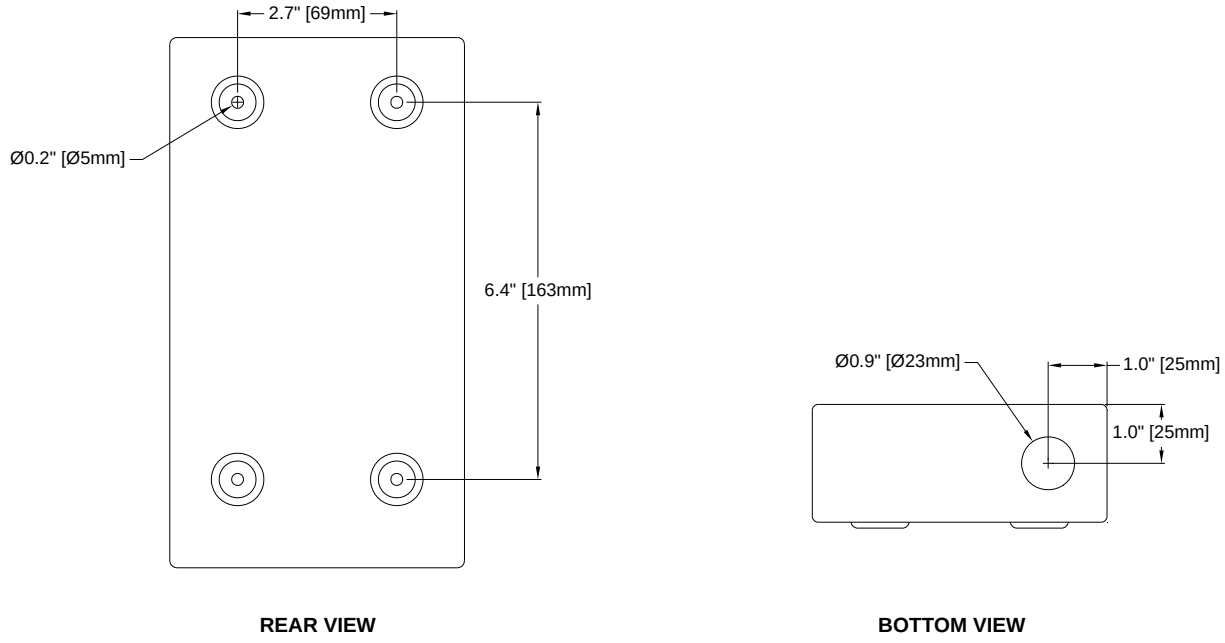


Figure 2 - HDE10 Mounting

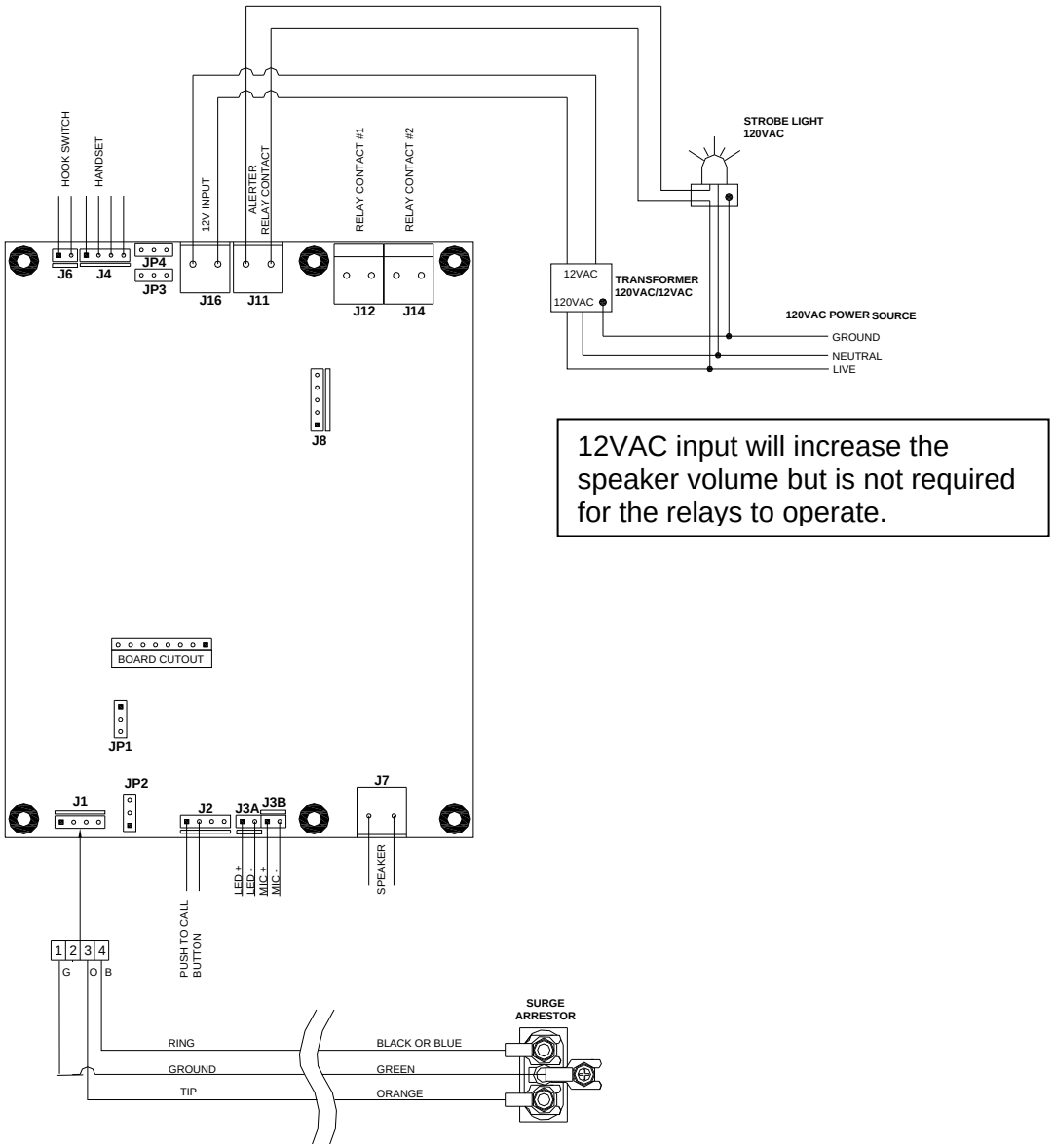


***Figure 3 - Wiring* Standard Models**

Note: Moving the jumper on JP2 from P to R after initial programming will prevent programming changes and nuisance calls by stopping the telephone from auto-answering.

Installing the HDE 11/11A/1100/1100A Telephones

- Follow all appropriate electrical codes and use only approved electrical fittings for the installation. If 120VAC power is provided to the Auxiliary Relay the enclosure must be properly grounded to the surge arrestor.

  Note: *Verify regulatory requirements before installing on public network.*
- Ensure that none of the electrical connection circuits are live.
- No other telephones may be installed on the HDE extension.
- Remove the cover screws from the front of the unit and carefully remove the front cover assembly. Note that the electronics are attached to the front plate.
- Prepare an opening 7 $^{5}/_{8}$" (193 mm) wide, 10 ¼" (260 mm) high and 2 ½" (64 mm) deep. Install blocking around the rough opening if required.

  See: *Figure 6 - HDE11 & HDE1100 Mounting.*
- Bring the telephone wiring into the bottom of the opening. If the optional external power supply and/or the Auxiliary Device Relay are utilized, or if the telephone is an advanced model with two Supplemental Relays bring in wiring for these as well.

  See: *Figure 3 - Wiring* Standard Models *or Figure 7 - Wiring* Advanced Models*.*
- Install an appropriate fitting into the 7/8" (22mm) opening in the bottom of the enclosure. If an additional cable entrance is required punch a hole in the bottom of the enclosure in a convenient location. Ensure that the fittings and wiring will not interfere with the circuit board when the faceplate is replaced.
- Bring cables into the enclosure through the fittings and secure the enclosure into the opening.
- For convenience while connecting wiring the faceplate may be temporarily mounted inverted to the right side of the enclosure.
- Attach individual wires from the exchange (Tip/Ring/Ground) to the surge arrestor (Tip & Ring are not polarity sensitive). If the external power supply and/or Auxiliary Device Relay are utilized, or if the telephone is an advanced model with two Supplemental Relays connect wiring in accordance with local electrical standards.

  Note: *Supplemental Relay #1 closes when button 1 is pressed on the monitoring telephone and Relay #2 closes when button 2 is pressed.*
- If it is desired to prevent unauthorized changes to the programming and avoid nuisance calls move the jumper on JP2 from P to R after initial programming has been completed.

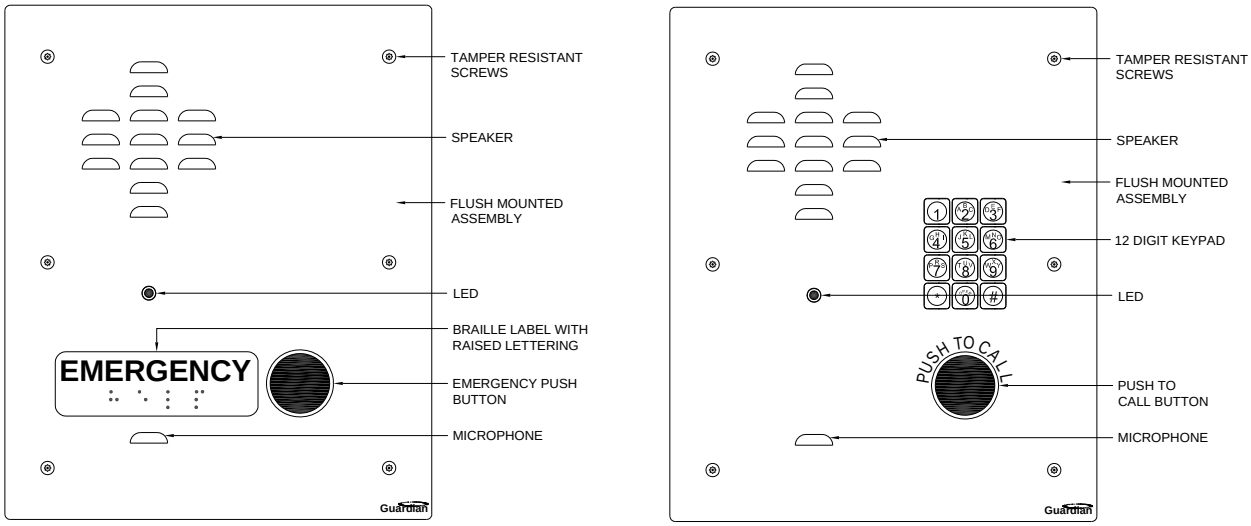
  Note: *This will limit the telephone to outgoing calls only.*

Commissioning

- Ensure all connections are tight, then replace and secure the cover. Use the driver bit provided to install the tamper resistant screws.

  Tip: *Store the driver bit in a secure place for future use.*
- Connect the telephone into the system.
- Program the telephone.

  See: *HDE Programming.*
- Test the unit by calling to and from another telephone.



HDE11 & HDE11A **HDE1100 & HDE1100A**

Figure 4 - HDE11 & HDE1100 Features

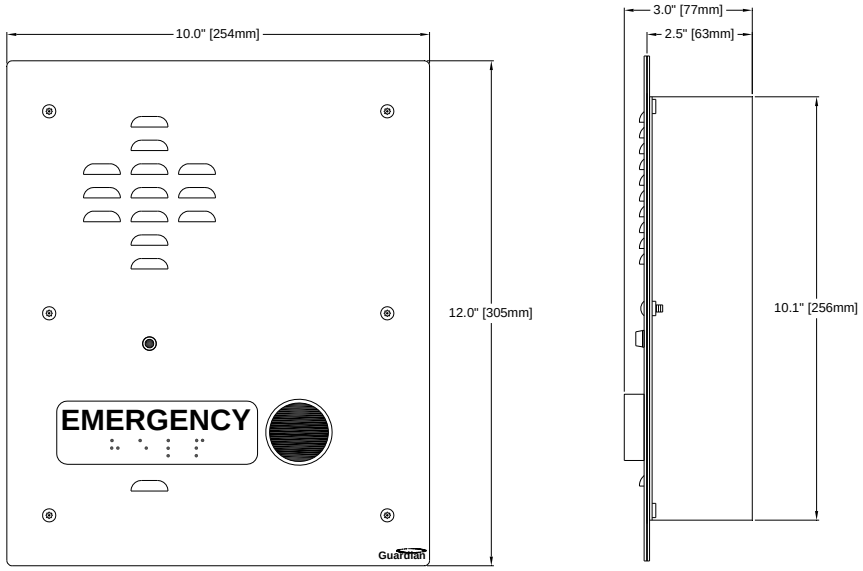


Figure 5 - HDE11 & HDE1100 Dimensions

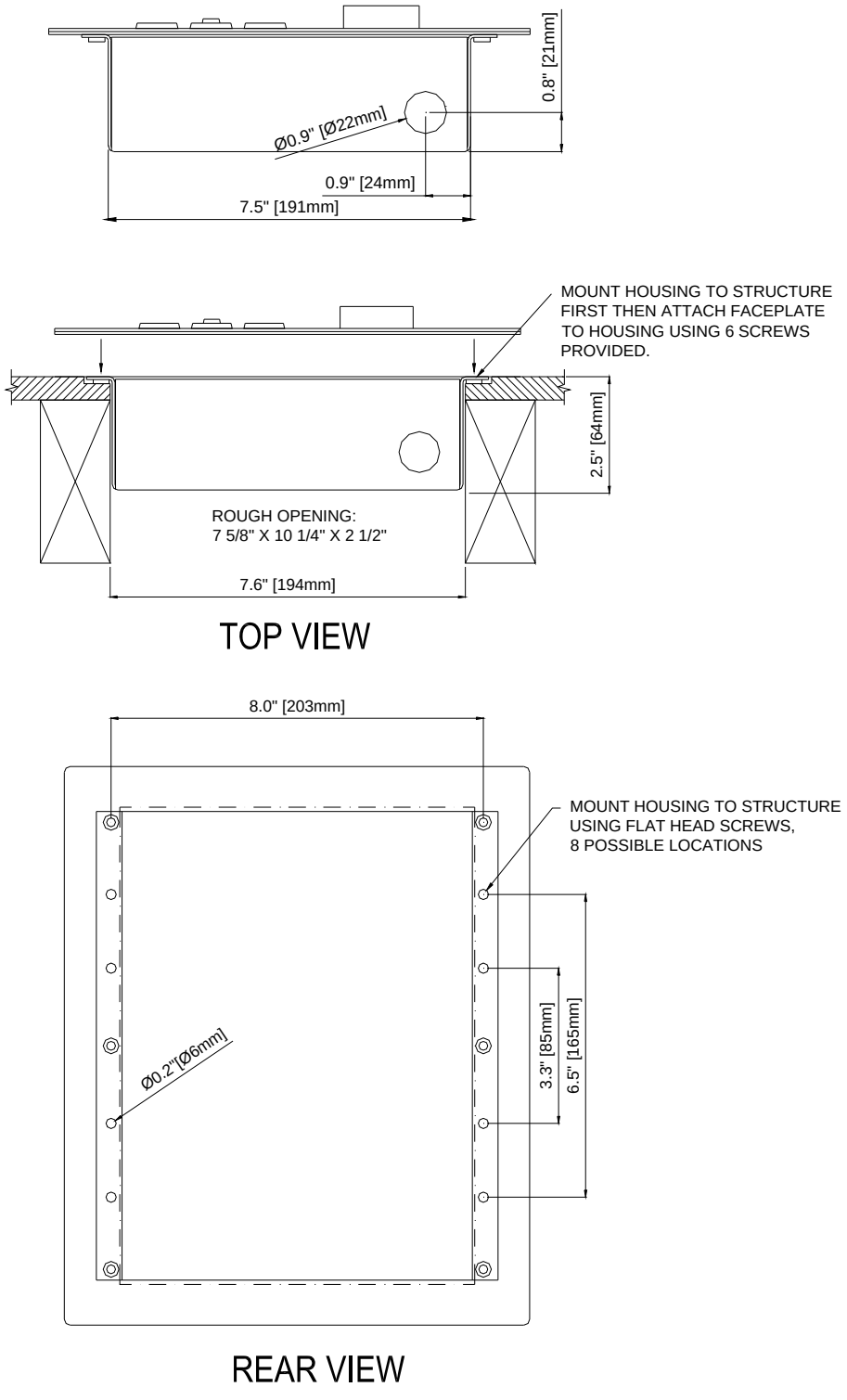


Figure 6 - HDE11 & HDE1100 Mounting

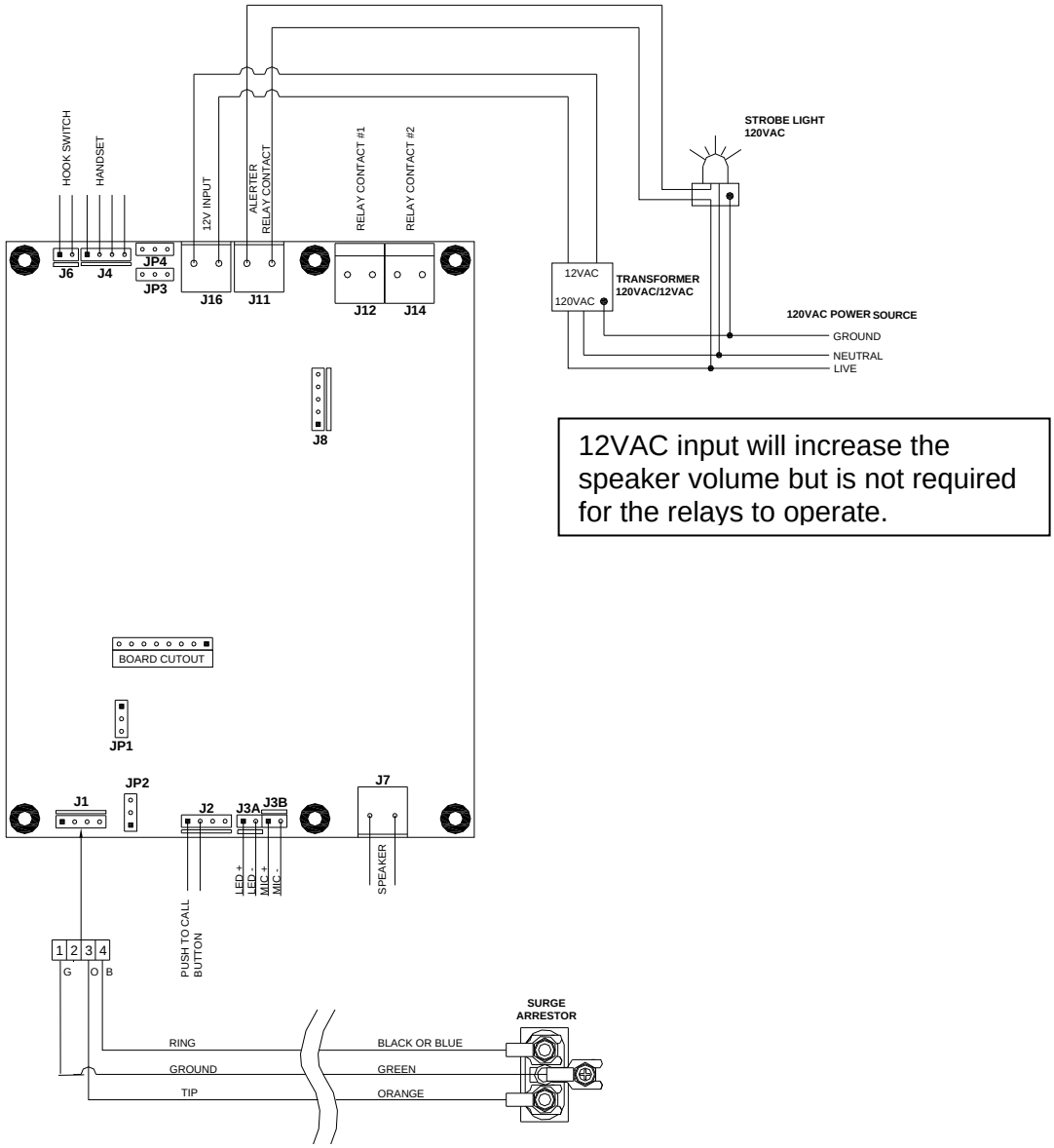


***Figure 7 - Wiring* Advanced Models**

Note: Moving the jumper on JP2 from P to R after initial programming will prevent programming changes and nuisance calls by stopping the telephone from auto-answering.

On the advanced board the supplemental relay #1 (J12) nearest the center of the board is actuated by pressing button 1 on the monitoring station telephone and relay #2 (J14) by pressing button 2.

The auxiliary relay closes when the telephone is off-hook.

Installing the HDE 12/12A/1200/1200A Telephones

- Follow all appropriate electrical codes and use only approved electrical fittings for the installation. If 120VAC power is provided to the Auxiliary Relay the enclosure must be properly grounded.
- Ensure that none of the electrical connection circuits are live.
- No other telephones may be installed on the HDE extension.
- Remove the cover screws from the front of the unit and carefully remove the front cover assembly. Note that the electronics are attached to the front plate.
- If an additional cable entrance is required punch a hole in the enclosure in a convenient location. Ensure that the fittings and wiring will not interfere with the circuit board when the faceplate is replaced.
- Choose a wall location that is free of obstructions and permits space for cable or conduit runs.
- Ensure mounting can support 7lbs (3kg) and any additional foreseeable load.
- Use the template provided or the enclosure itself to locate and drill holes for #8 or M4 mounting screws.
- Secure the unit to the wall.
- For convenience while connecting wiring the faceplate may be temporarily mounted inverted to either side of the enclosure.
- Attach individual wires from the exchange (Tip/Ring/Ground) to the surge arrestor (Tip & Ring are not polarity sensitive).
- If the external power supply connection and/or Auxiliary Device Relay are utilized, or if the telephone is an advanced model with two Supplemental Relays connect wiring in accordance with local electrical standards.
- If it is desired to prevent unauthorized changes to the programming and avoid nuisance calls move the jumper on JP2 from P to R after initial programming has been completed.

Commissioning

- Ensure all connections are tight, then replace and secure the cover. Use the driver bit provided to install the tamper resistant screws.
- Connect the telephone into the system.
- Program the telephone.
- Test the unit by calling to and from another unit.

Note: *Verify regulatory requirements before installing on public network.*

See: *Figure 10 - HDE12 & HDE1200 Mounting*

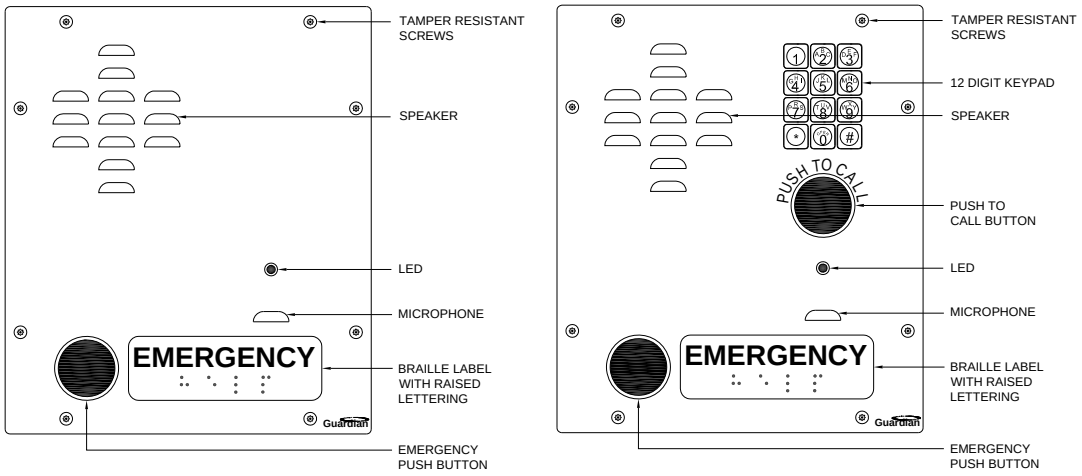
See: *Figure 3 - Wiring* Standard Models *or Figure 7 - Wiring* Advanced Models

Note: *Supplemental Relay #1 closes when button 1 is pressed on the monitoring telephone and Relay #2 closes when button 2 is pressed.*

Note: *This will limit the telephone to outgoing calls only.*

Tip: *Store the driver bit in a secure place for future use.*

See: *HDE Programming.*



HDE12 & HDE12A **HDE1200 & HDE1200A**

Figure 8 - HDE12 & HDE1200 Features

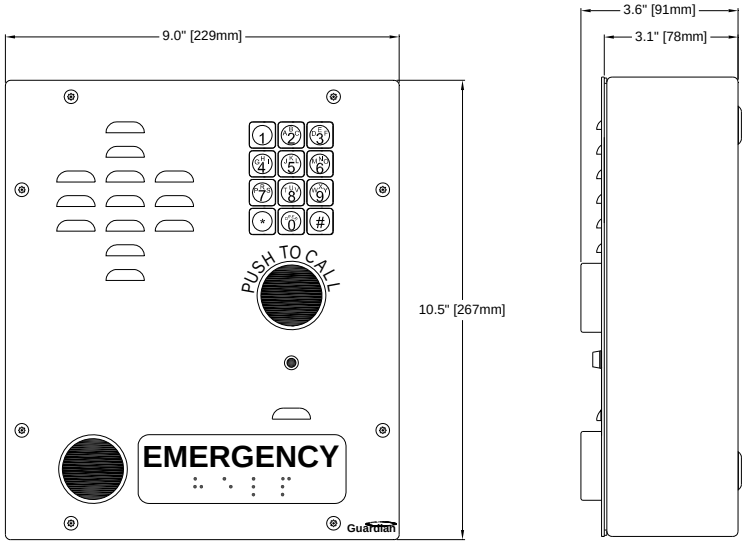


Figure 9 - HDE12 & HDE1200 Dimensions

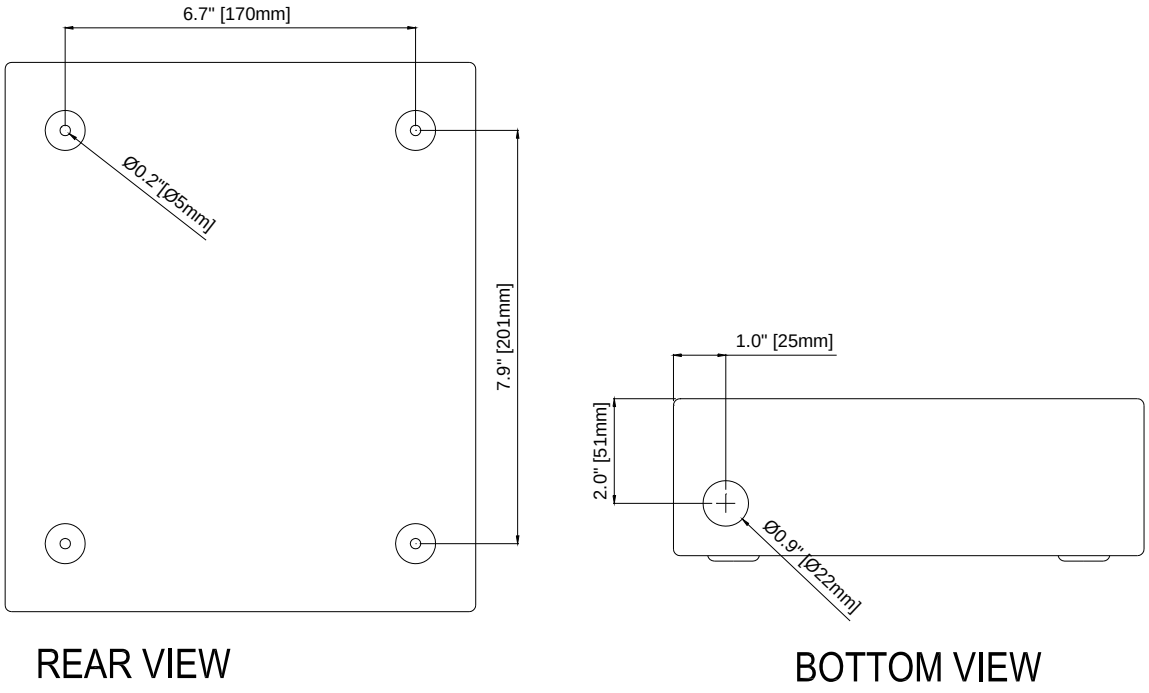


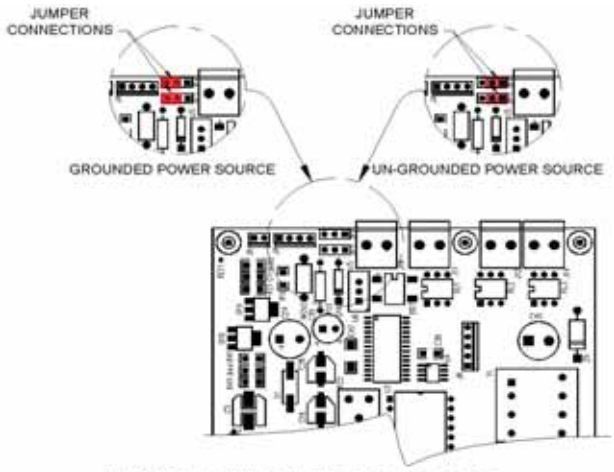
Figure 10 - HDE12 & HDE1200 Mounting

External Power Supply Jumpers

The three pin jumpers JP3 and JP4 are used to identify the type of external power source that is used on connector J10 to boost the speaker volume.

If a floating power source (power adapter, ungrounded power source etc.) is used, set both jumpers on headers JP3 and JP4 to pins 1 and pin 2.

If a grounded power source is used, set both jumpers on headers JP3 and JP4 to pins 2 and pin 3.



JUMPER CONNECTIONS FOR P006392

Volume Control Setting

Remotely Setting the Speaker Volume

The speaker volume can be adjusted remotely by making a call to the HDE phone. Follow the programming procedure to get into the program mode and change the settings in the registers below.

Register 31 (Receive Gain)

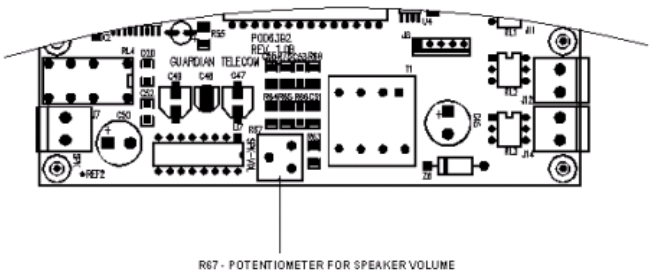
The receive gain is the amplification of the receive signal before it is fed to the speaker amplifier. The receive gain can be adjusted from 39dB to 54dB in eight steps. The volume of the speaker will be affected by adjusting the receive gain, however it will also affect the voice switch circuit; therefore it is recommended that this setting be left at the manufacturer's default of 6.

Register 24 (Speaker Volume)

This is the telephone line powered speaker amplifier volume control. It has a total attenuation of -20dB with maximum gain of 0dB, and a minimum gain of -20dB. This can be adjusted in 8 steps by setting the value from 1 to 8.

Speaker Volume Control of the Amplifier with External Power (Advanced -A Series only)

Potentiometer R67 is the gain control of the amplifier powered by the external power source. While in the programming mode set register #24 to six, then adjust potentiometer R67 to the preferred speaker volume. R67 can provide a fine adjustment of the speaker volume without going back into the programming mode.



WARNING!
You cannot program your HDE telephone without the correct access code. Contact Guardian Telecom for assistance if you have lost or forgotten your access code. Guardian Telecom can reprogram your HDE telephone remotely with a master code.

Note: In order to program an HDE telephone it must receive Analog DTMF signals.

HDE Programming

Guardian recommends that the programmer has a DTMF decoder available, in order to confirm the functions that are chosen.

Access code entering procedure:

1. Call the HDE and wait for it to auto-answer.
2. Press "0" to access programming.
3. Enter the eight digit access code, (initial code from the factory is 12345678, this may be changed – see Register number 10).
4. Press "*".
5. If entry has been successful one beep will be heard, if not the HDE will go back on hook.

Programming procedure:

1. Enter the two digit number corresponding to the Register to be programmed. A single beep will be heard.
2. Enter the number or numbers to select the desired phone number or parameter.
3. If less than the maximum number of digits have been entered press "*" to store the selection. One beep will signify that the entry has been accepted, two beeps will signify that the entry has been rejected. If the maximum number of digits have been entered the program will store the selection automatically, a beep will be heard and it will not be necessary to press “*”. It is not necessary to go on-hook between programming registers.
4. Registers 01, 00, 02, and 03 can accommodate from zero to 20 digits. When the terminator “*” is entered the program will close and store the number into the register. A beep tone will be heard and the program will then be ready to program another register. If the Emergency phone times out, or the programming phone hangs up before the terminator “*” is entered, the program will not store the phone number into the selected register and it will retain the existing number in memory. If the terminator key “*” is entered without any other keys, the register will be blank and when the switch is activated there will be no number to dial out. This is used for a ring-down line where the PABX directs the call. This feature could also be used if it is desired to prevent the phone from attempting to dial a second number if the first one is busy.
5. If the HDE has a keypad an access number (for example 9 - to get an outside line), can be stored in Register #02 and the rest of the number dialed manually.
6. The “#” is counted as one digit in the phone number. When the number is dialed out the “#” key will be treated as a three second pause. This may be required if an access number must be keyed in.
7. To terminate programming put the programming phone back on-hook or press the "#" key.

When Register 09 is programmed with an "*" only there will be no response from the HDE when the Station ID is queried.

The HDE can be used in ring-down mode where the PABX dials the required number, see #4 above.

Transmitting and Receiving paths priority:

Potentiometer R22 provides control of the information flow path of the hands free function of the phone. Adjusting the potentiometer in a counter clockwise direction will increase the sensitivity of the receive path and adjusting it clockwise will increase the sensitivity of the transmit path. The default setting is mid-range.

Incoming Call Lockout:
In some circumstances it may be desirable to restrict the telephone to outgoing calls only; for example to prevent unauthorized programming changes or to avoid nuisance calls. This can be accomplished by programming the telephone then moving the jumper on JP2 from P to R. See Figures 3 and 7.

Register Number and Functions for the HDE Series:

This list contains all the possible functions of the HDE Series.

Register number	Functions	Descriptions	Entered codes	In all versions	Remarks
00	Phone #1 B **N/A on 1100 or1100A**	Switch #1 (Emergency) Autodial, Second phone number	20 digit phone number		**Second Autodial number** – if the second number is busy or does not answer within 30 seconds it will go on-hook.
01	Phone #1 A **N/A on 1100 or 1100A**	Switch #1 (Emergency) Autodial, First phone number	20 digit phone number		**First Autodial number** – If the number is busy or does not answer within 30 seconds it will try the second number.
02	Phone #2	Switch #2 (Push To Call) Autodial phone number	20 digit phone number		Only if a second switch is installed.
03	Phone #3	Switch #3 (Push To Call) Autodial phone number	20 digit phone number		Only if a third switch is installed.
04 - 07	Not used				
08	Default Settings	11 Dial tone check = 1 12 Call progress tone = 1 13 EM switch lockout = 1 14 Message Playback = 2 21 Talk time = 1 22 Max digits in keypad dialing = 7 23 Handset volume = 3 24 Speaker volume = 6 25 Ring count = 0 26 Relay closed time = 1 27 Voice switch speed = 1 28 BGN offset = 2 29 Soft clip = 5 30 TX level = 6 31 RX level = 6	None	Yes	Accessing register 08 returns all functions listed in the Description column to the default settings shown. A beep will be heard when the process has been completed.
09	Station ID #	Station Identification number (recognizing the station ID requires a DTMF decoder at the receiving end)	1 - 8 digit number * optional	Yes	To program enter a number of 1 to 8 digits followed by an * to store. If a number is stored the station ID will be sent out automatically when it auto-answers; it will also be sent out if a call is made from the HDE and the receiver of the call presses the * button. If only an * is entered in the register the HDE will not send out the station ID and there will be no response from the HDE when the station ID is queried
10	Access code	Programming mode Access code	8 digit number	Yes	(The Access Code can be changed by Guardian with a master code in case the customer forgets the code they have changed to). F**actory is 12345678.**
11	Dial tone check	Dial tone check before autodial	1 = check dial tone, 2 = no check	Yes	Some PABXs do not generate a dial tone in which case the code must be set to 2. **Default = 1**
12	Call progress tones	Call progress tone associated with systems	1 = PABX, 2 = CO line	Yes	PABXs and COs have different Call Progress Tones. **Default = 1**
13	EM switch lockout	Emergency switch lock out	1 = disable lockout 2 = enable lockout	Yes	If the Emergency Switch Lockout is disabled, pressing the emergency button during a call or at the end of a call will put the phone on-hook. If the Emergency Switch Lockout is enabled it will not go on-hook if the emergency button is pressed. This feature could prevent an attacker from turning the phone off if an emergency call had been made. The phone will go on-hook if the number it dials is busy or un-answered for 30 seconds, if this occurs it will then dial the second number if one has been programmed in. **If enabled and if the PABX to which the Speaker Phone is connected does not generate a disconnect signal, the Speaker Phone could stay off-hook and unusable for the duration of the**

					Talk Time that has been programmed in. In this situation the operator at the monitoring station must press the # key before hanging up, to cause the Speaker Phone to go on-hook. **Default = 1**
14	Message Playback (optional)	Pre-record message playback	1 = Playback message 2 = No Playback		Pressing * at the monitoring station first causes the speaker phone to send the station ID then plays back the message, which could describe the location of the phone. **Default = 2**
15	Record Message (optional)	Enter Voice Message Recording mode	N/A		For monitoring only. Set for 20 seconds maximum duration at which time it will send a cut-off signal. If * is pressed at the end of the message it will send a cut-off signal at this point, which may reduce the time that the line is tied up.
16 - 20	Not used				
21	Talk time	Communication link timer (1 -10 minutes)	1 – 9, 0 = 10 minutes	Yes	In a speaker phone without a handset this disconnects a call after the time entered is reached. This is to prevent the line being tied up if a phone calling in to the speaker phone does not hang up and the speaker phone is not put on-hook. **Default = 1**
22	Max digits in keypad dialing	Maximum digits allowed in keypad dialing are 4 to 13 or no keypad lockout.	1 - 9 = 3+(1 to 9) 0 = No keypad lockout	Yes	Entering a low number, i.e. 7 prevents a caller on a speaker phone with a keypad from making a long distance call. **Default = 10**
23	Handset volume	Handset Reset volume; 2dB/step	1 – 8	Yes	On phones with handsets that have volume controls, this function returns the volume to a preset level when the handset is hung up. **Default = 3**
24	Speaker volume	Speaker volume; 2dB/step	1 - 8	Yes	Sets the speaker volume. This is preset and cannot be changed by the user of the phone. **Default = 3**
25	Number of rings before call being answered	Pre-auto-answer ring counts - only relevant if the jumper on JP2 is set to"P"	0 -9 0 = Call is answered within the first ring.	Yes	Normally set at 0 but in cases where there is a desire for the ring signal to be heard multiple times making persons around the phone aware that monitoring will occur. Also to alter answering time in case another device such as a fax machine uses the same line. Pressing any button or picking up the handset will answer immediately. **Default = 0**
26	Supplemental relays	Relay closed time in seconds = number entered x 5	1 – 9 9 = 45 seconds		Sets the time in seconds that the Supplemental relays will stay closed to activate the desired function. **Default = 1**
27	Voice switch speed	Rx to Tx switch time 1 to 4	1 = max speed 4 = min speed	Yes	Sets the time for the circuitry to switch from receive to transmit mode. **Default = 1**
28	Background noise offset level, (BGN)		1 = 120mV 2 = 180mV 3 = 240mV 4 + 300mV	Yes	Sets the sensitivity of the circuitry to switch to transmit mode ignoring background noise. If register #29 is set to 8 BGN is nullified. **Default = 2**
29	Soft clip (s.c.), BGN settings		1 = Tx soft clip 2 = Rx soft clip 3 = Tx, Rx s.c. 4 = BGN on 5 = BGN, Tx s.c. 6 = BGN, Rx s.c. 7 = BGN, Tx, Rx s.c. 8 =BGN off, Tx, Rx s.c. off		Soft clip on prevents loud clicks from being processed through to the speaker. **Default = 5**
30	TX gain	Sets the transmit gain	Transmit gain: 0-8 39dB to 48 dB 1dB / step		**Default = 6**
31	RX gain	Sets the receiver gain	Receive gain: 0-8 39dB to 54 2dB / step		**Default = 6**

Incoming Calls

Incoming calls to the HDE are treated differently depending on the position of the jumper on JP2 of the circuit board and the number that is programmed into Register #25 (number of rings before call answered).
If the jumper on JP2 is in the P (programming) position the phone will auto-answer after the number of rings programmed into Register #25, unless the EMERGENCY or CALL button is pressed first, which will answer the call immediately. The ring signal will be heard through the phone's speaker unless a "0" (zero) has been programmed into register #25, in which case there will be no ring signal and the only indication that a connection has been made will be that the LED will be lit, or if the caller speaks.
If the jumper on JP2 is in the R (ring) position the phone will not auto-answer and there will not be a ringing signal from the phone's speaker; the caller however will hear a ringback signal.

Station Monitoring

Displaying the Station ID number requires a DTMF decoder at the monitoring station. The number will be displayed if register #09 has a number followed by an asterisk "*". The Station ID can be determined at any time during a call by pressing the asterisk "*" key at the monitoring station.
Equipment is available to automatically monitor the integrity of a system. Contact Guardian Telecom for information on Station ID display or Automatic Monitoring equipment.

Actuating the Supplemental Relays on Advanced Models

Supplemental relays can control cameras, external lighting, electronic door locks, etc. Once communication has been established with the HDE telephone pressing (1) on the monitoring station telephone will cause the first relay to close for the length of time that has been programmed in. Likewise pressing (2) will close the second relay.

Emergency Switch Lockout

If the Emergency Switch Lockout has been enabled – Register # 13 – and if the PABX to which the Speaker Phone is connected does not generate a disconnect signal, the Speaker Phone could stay off-hook and unusable for the duration of the Talk Time that has been programmed in. In this situation the operator at the monitoring station must press the # key before hanging up, to cause the Speaker Phone to go on-hook.

Making Calls with Keypad Equipped Models

When the "CALL" switch is activated the LED will be on steady and a dial tone will be heard on the speaker. The phone may dial out the PABX access number in register #02 (if programmed); the user has to dial the rest of the phone number. This is manual operation. If the user dials an incorrect digit pressing the "CALL" button will cancel the call and the phone will go to ON HOOK. There is no lock out on the "CALL" switch.

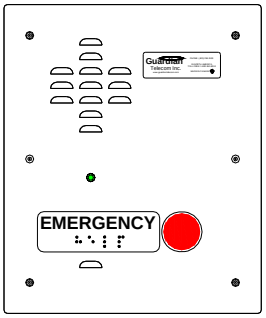
Field Repairs

Field repairs may only be carried out by qualified technicians using OEM parts. Substitution of parts voids warranty and may pose a hazard to users of the equipment.

See: *Replacement Parts*

Note: the circuitry in HDE Series telephones is protected by a Polyswitch resettable fuse. The fuse will reset itself after a time lapse determined by the fault condition and ambient temperature.

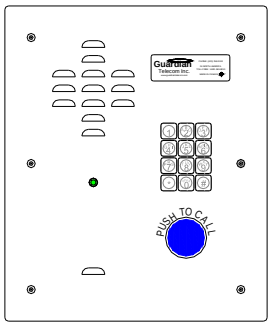
Operation



HDE10, HDE11, HDE11A, HDE12 & HDE12A EMERGENCY TELEPHONES

Press the EMERGENCY button. The pre-programmed telephone number automatically dials. If two auto-dial numbers were programmed in and the first number is busy the HDE will try the second number. If the second number is also busy the HDE will go on-hook. The LED will indicate the unit is dialing. If the unit is equipped with an external signaling device it will also activate. The LED will also indicate when a connection has been made. A conversation can now take place.

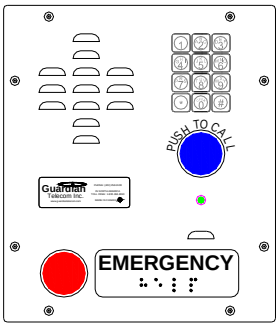
Note: Calls may be terminated by pressing the red button if register #13 is set to “1”; otherwise the call will only be terminated if the operator at the monitoring station presses the # key or the telephone times out.



HDE1100 & HDE1100A CALL TELEPHONES

TO CALL - Press the TO CALL button and wait for dial tone and green LED then dial the number. A conversation can now take place.
The number of digits that can be dialed out is set by Register #22.
If an access number has been stored in Register #02 the caller only needs to dial the rest of the number.

HDE1200 & HDE 1200A EMERGENCY/CALL TELEPHONES



EMERGENCY - Press the EMERGENCY button. The pre-programmed telephone number automatically dials. If two auto-dial numbers were programmed in and the first number is busy the HDE will try the second number. If the second number is also busy the HDE will go on-hook. The LED will indicate the unit is dialing. If the unit is equipped with an external signaling device option it will also activate. The LED will indicate when a connection has been made. A conversation can now take place.

TO CALL - Press the TO CALL button and wait for dial tone and LED then dial the number. A conversation can now take place.
The number of digits that can be dialed out is set by Register #22.
NOTE: The Emergency call always takes **priority** over a regular call. In the event the emergency button is pressed while a regular call is in progress the regular call will be disconnected and the emergency call will proceed.

LED Indicator		
Action	**Phone Status**	**LED Status**
Press CALL button	Phone dials pre-programmed number(s)	Flashing
	Phone linked or connected to dialed number	Steady
	Time out, unit will disconnect in 10 seconds	Flashing

Specifications	
Audio Performance	
Audible Range Frequency Response	300 – 3400 Hz
Dialing Method	DTMF
Transmit Objective Loudness Rating (TOLR)	-36 dB @ 0.5 meter
Maximum Speaker Volume All Models	80 dB @ 0.5 Meter Without External Power Supply
Maximum Speaker Volume HDE10/11/1100/12/1200	85 dB @ 0.5 Meter With External Power Supply
Maximum Speaker Volume HDE11A/1100A/12A/1200A	92 dB @ 0.5 Meter With External Power Supply
Set Impedance	600 Ohms Nominal
Maximum Loop	15,000 ft (4,500 M) of 22 AWG Copper
Electrical	
Auto Answer Sensitivity	40 – 100 VRMS, 16 – 25 Hz
Line Voltage	24 – 56 VDC
Line Fuse	0.25 Amp 250 Volt Resettable
Ringer Equivalence Number	0.44B
Connection Method	Surge Arrestor
Call Progress Tones	Dial Tone: 350Hz & 440Hz @ -16dBm0 Busy Tone: 480Hz & 620Hz @ -24dBm0 Duty cycle 500mS on, 500 mS off
External Power Supply (Optional) HDE10/11/1100/12/1200	12V – 24V, 0.25 A
External Power Supply (Optional) HDE11A/1100A/12A/1200A	12V – 24V, 0.5 A
Relay Contacts	
Auxiliary Relay	0.12A @ 250VAC
Supplemental Relays 1 & 2	2.0A @ 60VDC
Environmental	
Temperature	-40° to +50° C (-40° to +122° F)
Humidity	0 to 95% RH
Mechanical	
Body Construction	16 Gauge Steel, Zinc Dichromate Plated and Powder Coated
Dimensions	See Drawings – Pages 5 to 9
Weight	HDE-10 3.5 lbs (1.6 kg), HDE 11/1100 6.8 lbs (3.1 kg), HDE-12/1200 7.2 lbs (3.3 kg)
Standard Mounting	Vertical Wall or Recessed
Wiring Access	One 7/8" Hole For Owner Supplied Fitting
Hardware Material	Stainless Steel
Compliance	
Industry Canada	1012A-601B

Replacement Parts	
Part No.	**Description**
P006473	2” Speaker C/W Connector
P006474	4” Speaker C/W Connector
P006010	PCBA – Speaker Phone Standard
P006393	PCBA – Speaker Phone Advanced
P004593	Microphone C/W Connector
P004585	Green LED
P005706	Bit For Tamper Proof Screws
P005682	Tamper Proof Screw
P005958	Push Button Switch “RED”
P006000	Switch Contact Block Green “N.O.”
P006482	Push Button Switch “BLUE”

Cleaning Tips for Guardian Telephones

Guardian Telephones may occasionally need to be cleaned to maintain appearance. Generally, wiping the surface with a clean, water dampened cloth will remove most films or residues. If the soiling is too stubborn for plain water, a mild detergent solution may be used. Be sure to wipe away any detergent residue with a plain water dampened cloth. The Telephone may be cleaned with any general-purpose household glass and surface type cleaner. Do not spray the telephone directly! Spray the cleaner on a soft cloth then wipe the surface. Pre-treated cloths, like those used for eyeglasses or cameras, may be used to clean the Telephone. Premoistened towelettes may also be used, however, avoid those containing lanolin or aloe as they will leave a slippery residue. The handset and surface of the telephone may be cleaned with disinfectants used for general cleaning in a medical environment. Isopropyl alcohol may be used applied with a cloth. Avoid using alcohol on silicon based keypads, since doing so may significantly degrade legibility.

- Do not use furniture polishes, waxes or plasticizer-based cleaner (Armor All etc.)
- Do not use lanolin, aloe, glycerin or other skin care type products.
- Do not apply any solvent such as acetone, mineral spirits etc.

Warranty

Guardian Telecom warrants your product to be free of defects in material and workmanship for a period of one year. Guardian Telecom will repair or replace any defective unit that is under warranty free of charge.

This warranty is null and void if any non-authorized modifications have been made to this product, or if it has been subjected to misuse, neglect, or accident. This warranty covers bench repairs only; such repairs must be made at Guardian Telecom or an authorized service depot. Guardian Telecom is not responsible for costs incurred for on-site service calls, freight, or brokerage.

A return authorization must be obtained prior to warranty claims or repairs.

Disclaimer

The products covered by this manual are designed for use in Industrial Environments and/or Hazardous Locations. Due to the range of possible applications for these instruments the manufacturer will not be responsible for damages or losses of any kind suffered as a result of the use of this product, including consequential damages.

Warning

This device may be opened and reassembled by qualified personnel only, for the purposes of installing the product, making adjustments and replacing components, following the instructions in the product manual.

High voltages may be present in this product when connected to telephone wiring.

Service Telephone Number

1-800-363-8010

Guardian Telecom provides a customer service telephone number which is toll-free within North America. If you need assistance when installing or operating this product, please call the toll-free telephone number between regular business hours (8:00AM-5:00PM), Mountain Standard Time. If you are calling outside of regular business hours, please leave a detailed message, and a member of Guardian Telecom's Service Department will return your call as soon as possible. If your product requires service, Guardian personnel will supply you with an RMA (return materials authorization) number over the telephone or through our web site product return page. This number must be included with your return address and the name of the person to contact.

Guardian Telecom Inc.
7552 - 10th Street N.E.
Calgary, Alberta, Canada T2E 8W1
Toll-free 1-800-363-8010
Ph. (403) 258-3100
Fax. (403) 253-4967
www.guardiantelecom.com

Feedback

Guardian Telecom continually strives to make reliable, durable, and easy to use products. If you, as an installer or user of our equipment, have any suggestions for improvements to this or any of our products or documents, including this manual, we would appreciate hearing from you.

Guardian Product Return
Guardian products have been quality tested and are in full working order when shipped from the factory, given the rugged nature of these products shipping is not expected to damage a unit. In the unlikely event of a malfunction Guardian follows the three step procedure below.
Step I - On-Site Correction
• The most common source of difficulties with a new product is improper installation in one of two ways: incorrect wiring connections or connection to an incorrect power source.
• Product wiring needs to be properly connected to the on-site wiring. Correct wiring instructions are shown in the user manual included with the product.
• Connecting a telephone to a standard power source, rather than tip & ring, will blow the telephone's internal, user-replaceable fuse or trip the resettable fuse. In the event of fuse burn-out, disconnect the telephone from the power source, replace the fuse, and reconnect following the wiring diagrams provided with the product. If a resettable fuse trips continuously disconnect the telephone from the power source and reconnect following the wiring diagrams provided with the product.
Step II - Return Materials Authorization (RMA)
• When a product has been installed following user manual instructions, and the unit fails to operate, the user must contact Guardian Telecom to obtain authorization to return the product. This can be done by completing a RMA form online at www.guardiantelecom.com, or by calling the service telephone number given in this manual.
• After providing information on the product, the owner and the nature of the problem, Guardian will issue a RMA number, to be shown on documentation returned with the product.
• In addition to the RMA number, shipping documents should include name, address and telephone number of the owner along with contact information for the person responsible for the repair and/or the user who identified the malfunction.
• (Where a product is being returned for repair from outside of Canada, customs documentation must show the product's serial number, date of export [date of purchase], and a notation that the equipment is: "Canadian goods returning.")
Step III - Factory Authorized Service
• Once received, each product is carefully inspected and tested. If the product is under warranty, repairs are completed and the product returned to the owner, generally within five working days of receipt by the factory.
• A product that has been subjected to misuse, neglect or accident or is beyond the warranty period will be evaluated. The service department will provide the owner's representative with a repair cost estimate. Once approved, repairs are completed and the product returned, generally within five working days.

Notes:

Model No.
Part No.
Serial No.
Date of Purchase

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